



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/593,789

05/25/2007

Rainer Porzel

1784.3034.001

3245

23399 7590 09/13/2011
REISING ETHINGTON P.C.
P O BOX 4390
TROY, MI 48099-4390

EXAMINER

SHAPIRO, JEFFERY A

ART UNIT

PAPER NUMBER

3653

MAIL DATE

DELIVERY MODE

09/13/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,789	Applicant(s) PORZEL ET AL.	
	Examiner JEFFREY SHAPIRO	Art Unit 3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 20-39 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☐ Claim(s) ____ is/are rejected.
- 8) ☒ Claim(s) 20-39 is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 20-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Salecker et al (US 2002/0134637 A1).

3. Regarding Claim 20, Salecker discloses a hydraulic actuating device (304) for an automotive friction clutch (203, 303), as mentioned at para 128, 167, 282, 341, 375, 376 and illustrated at figures 10, 21, having a master cylinder (211) and a slave cylinder (210) with a slave piston, as illustrated at figure 10, which is connected in series hydraulically via a liquid column, which is functionally connected/linked with a clutch release member, i.e., clutch engaging and disengaging system, as mentioned at paragraph 341, lines 12-15.

Regarding Claim 20, Salecker further discloses an adjusting unit and a control unit as mentioned at paragraph 341, as mounted on circuit board (227) as illustrated at figure 11b, with adjusting unit, i.e., setting member (213).

Regarding Claim 20, Salecker further discloses that said adjusting unit comprises a piston adjusted hydraulically with the piston of the master piston of the master cylinder, as mentioned in paragraphs 341-348, with electric motor (212), the system being controlled by a control program based on the variables sensed by the sensor

Art Unit: 3653

system (214-217 and 219) as mentioned at paragraphs 86, 114, 116, 305, 320, 343, 352-355.

Regarding Claim 21, Salecker discloses a first sensor, which may be construed as any one of sensors (214-217 and 219), which are all connected to the controller as previously mentioned.

Regarding Claim 22, Salecker discloses a second sensor, which may be construed to be any one of the sensors (214-217 and 219) other than the first sensor.

Regarding Claim 23, Salecker discloses mounting in parallel as mentioned in paragraphs 4, 28, 59, 130, 131, 216, 217, 222, 223, 228, 230, 231, 235, 321.

Regarding Claim 24, note the correcting/setting variable as mentioned in paragraph 54, noting again sensors (214-217 and 219). Note also that the travel of the pistons (slave and master) are both adjusted according to the sensed conditions.

Regarding Claim 25, note that the control programs of Salecker necessarily use the equation/formula as described according to typical electro-mechanical design methods. Note also the mention of a clutch movement detection device (214) as mentioned at paragraphs 12, 341 and 349.

Regarding Claim 38, note that Salecker's master and slave cylinders and transmission all have shafts which are considered to meet the limitation of a spindle, as illustrated at figures 10-12b.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3653

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Salecker et al (US 2002/0134637 A1) in view of Steinell et al (US 2003/0221930 A1).

7. Salecker discloses the system as described above.

8. Regarding Claim 26, note that it would have been obvious to one ordinarily skilled in the art to have made any variable constant. See also Salecker paragraphs 32-44, 55, 84, 85, 106, 109, 145, 240, 290, 307-310, 355, 362, 366, 369, 371, 413, 417.

9. Regarding Claim 27, Salecker does not expressly disclose, but Steinell discloses arranging the adjusting piston (25, 27) in connection with the master piston (29, 31) between the master and slave pistons, as illustrated at figure 1.

10. At the time of the invention, it would have been obvious to one of ordinary skill in the art to have placed Salecker's master cylinder in parallel with two adjusting pistons

Art Unit: 3653

as taught by Steinel for the purpose of exerting opening and closing forces on the clutch despite compensation required to overcome friction. See Steinel, paragraph 11.

11. Regarding Claim 28, note that Salecker's device and control programs necessarily detect slave pressure, master pressure, are detected and adjusted via the electric motor, as previously described above.

12. Regarding Claims 29, 31-33, although Salecker is silent as to calculating the desired master pressure, slave travel and adjusting travel according to the claimed formula, it would have been obvious to one of ordinary skill at the time of the invention to have obtained the formula based upon modern electro-mechanical design principals and mathematics.

13. Regarding Claim 30, Salecker compensates for clutch wear at paragraphs 126, 262, 341, 344, 377.

14. Regarding Claims 34 and 35, Salecker discloses a desired curve at figures 2a-2e, 5a-5c, 6, 6a, 6b, 13-15, 15a-15e, 16-20, 22 and 24-28.

15. Regarding Claims 36 and 37, Salecker discloses a master and a slave cylinder each having a pressure chamber with a return spring (307) and the cylinder is hydraulically connected to a reservoir. See paragraphs 132-137, 341, 348, 376 and figure 11a.

16. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salecker et al (US 2002/0134637 A1) in view of Vonnegut et al (US 2003/0024789 A1).

17. Salecker discloses the power transmission system as described above. Salecker discloses electric motors such as element (212).

Art Unit: 3653

18. Regarding Claim 39 Salecker does not expressly disclose, but Vonnegut discloses that brushless dc electric motors are equivalent structures known in the art to electrically transmit power as described at paragraph 22. Therefore, because a brushless DC motor was art-recognized equivalent to other possible electrical motors at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute Salecker's electric motor for a brushless DC motor as taught by Vonnegut.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kremmling et al '391 and Werner '324 are all cited as examples of power transmission apparatus with clutch and master/slave actuators controlled by adjustment curves.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY SHAPIRO whose telephone number is (571)272-6943. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stefanos Karmis can be reached on (571)272-6744. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3653

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey A. Shapiro/
Primary Examiner, Art Unit 3653

September 11, 2011